Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 - 10. (Cancelled)

11.   (Original) A method for processing a semiconductor manufacturing results file (results file), comprising the steps of:

determining a set of concentric wafer-rings of a wafer-map, the wafer-map given by the results file, the results file indicating a set of defect-coordinates associated with a set of wafer-defects falling within the wafer-map; and

computing a set of defect-percentages, wherein a first defect-percentage of the set of defect-percentages is (a) associated with a first wafer-ring of the set of concentric wafer-rings and (b) represents a ratio of the number of wafer-defects falling within the first wafer-ring to the total number of wafer-defects falling within the wafer-map.

12.   (Original) The method of Claim 11, further comprising the step of storing the set of defect-percentages in a defect-signature bank.

13.   (Original) The method of Claim 12, further comprising the step of associating a weighting-factor with the set of defect-percentages and storing the weighting-factor in the defect-signature bank.

14.   (Original) A method for processing a semiconductor manufacturing results file (results file), comprising the steps of:

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determining a first set of pie-slice shaped segments (wafer-slices) of a wafer-map, the wafer-map given by the results file, the results file indicating a set of defect-coordinates associated with a set of wafer-defects falling within the wafer-map; and

computing a first set of defect-percentages, wherein a first defect-percentage of the set of defect-percentages is (a) associated with a first wafer-slice of the first set of wafer-slices and (b) represents a ratio of the number of wafer-defects falling within the first wafer-slice to the total number of wafer-defects falling within the wafer-map.

15. (Original) The method of Claim 14, further comprising the step of storing the first set of defect-percentages in a defect-signature bank.

16. (Original) The method of Claim 15, further comprising the step of associating a weighting-factor with the first set of defect-percentages and storing the weighting-factor in the defect-signature bank.

17. (Original) The method of Claim 14, further comprising wrapping the first set of defect-percentages to obtain a second set of defect-percentages corresponding to a second set of wafer-slices, the second set of wafer-slices corresponding to a rotated version of the first set of wafer-slices.

18. (Original) A method for processing a semiconductor manufacturing results file (results file), comprising the steps of:

determining a first set of horizontal wafer-strips (horizontal-strips) of a wafer-map, the wafer-map given by the results file, the results file indicating a set of defect-coordinates associated with a set of wafer-defects falling within the wafer-map; and

computing a first set of horizontal-defect-percentages, wherein a first horizontal-defect-percentage of the first set of horizontal-defect-percentages is (a) associated with a first horizontal-strip of the first set of horizontal-strips and (b) represents a ratio of the number of wafer-defects falling within the first horizontal-strip to the total number of wafer-defects falling within the wafer-map.

19.   (Original) The method of Claim 18, further comprising wrapping the first set horizontal-defect-percentages to obtain a second set of horizontal-defect-percentages corresponding to a second set of horizontal wafer-strips, the second set of horizontal wafer-strips corresponding to a wrapped version of the first set of horizontal wafer-strips.

20.   (Original) The method of Claim 18, further comprising the steps of:

determining a first set of vertical wafer-strips (vertical-strips) of the wafer-map; and

computing a first set of vertical-defect-percentages, wherein a first vertical-defect-percentage of the first set of vertical-defect-percentages is (a) associated with a first vertical-strip of the first set of vertical-strips and (b) represents a ratio of the number of wafer-defects falling within the first vertical-strip to the total number of wafer-defects falling within the wafer-map.

21.   (Original) The method of Claim 20, further comprising wrapping the first set vertical-defect-percentages to obtain a second set of vertical-defect-percentages corresponding to a second set of vertical wafer-strips, the second set of vertical wafer-strips corresponding to a wrapped version of the first set of vertical wafer-strips.

22.   (Original) The method of Claim 20, further comprising the step of storing the first set of horizontal-defect-percentages and the first set of vertical-defect-percentages in a defect-signature bank.

23.   (Original) The method of Claim 22, further comprising the step of associating a weighting-factor with the first set of horizontal-defect-percentages and the first set of vertical-defect-percentages and storing the weighting-factor in the defect-signature bank.

24.   (Original) A method for processing a semiconductor manufacturing results file (results file), comprising the steps of:

determining a plurality of dies within a wafer-map, the wafer-map indicated by the results file, the results file indicating a first set of defect-coordinates associated with a set of wafer-defects falling within the wafer-map;

stacking the plurality of dies resulting in a die-overlay; and

analyzing the die-overlay to detect one or more repeating patterns.

25.   (Original) The method of Claim 24, wherein the analyzing step comprises a k-nearest-neighbor (k-NN) algorithm to determine the one ore more repeating patterns, and wherein the k-NN algorithm uses a second set of defect-coordinates, the second set of defect-coordinates corresponding to the first set of defect coordinates but modified to use the die-overlay as reference.

26.   (Original) A method for processing a semiconductor manufacturing results file (results file), comprising the steps of:

determining a plurality of reticle-fields within a wafer-map, the wafer-map indicated by the results file, the results file indicating a set of defect-coordinates associated with a set of wafer-defects falling within the wafer-map;

stacking the plurality of reticle-fields resulting in a reticle-field-overlay; and

analyzing the reticle-field-overlay to detect a repeating pattern.

27.　(Original) The method of Claim 26, wherein the analyzing step comprises a k-nearest-neighbor (k-NN) algorithm to determine the one ore more repeating patterns, and wherein the k-NN algorithm uses a second set of defect-coordinates, the second set of defect-coordinates corresponding to the first set of defect coordinates but modified to use the reticle-field-overlay as reference.

28 - 29. (Cancelled)

30.　(Original) A method for processing a semiconductor manufacturing results file (results file), comprising the steps of:

computing a set of k-nearest-neighbor distances (k-NN distances) for a set of defect-coordinates, the set of defect-coordinates indicated by the (results file), the set of k-NN distances indicating a first defect-cluster; and

extracting a set of defect-cluster-parameters for the first defect-cluster, the set of defect-cluster-parameters comprising defect-cluster length, defect-cluster width, defect-cluster area, defect-cluster perimeter, defect-cluster centroid, radius of defect-cluster curvature, angle of defect-cluster major axis, or distance of defect-cluster to nearest scratch centroid.

31.   (Original) The method of Claim 30, wherein the extracting step comprises determining an envelope around the defect-cluster.

32.   (Original) The method of Claim 30, further comprising the step of matching the set of defect-cluster-parameters against a defect-signature bank.

33 - 24. (Cancelled)